

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA, ex rel, )  
W.A. DREW EDMONDSON, in his )  
capacity as ATTORNEY GENERAL )  
OF THE STATE OF OKLAHOMA, )  
et al. )  
Plaintiffs, )  
V. ) No. 05-CV-329-GKF-SAJ  
TYSON FOODS, INC., et al., )  
Defendants. )

REPORTER'S TRANSCRIPT OF PROCEEDINGS

MARCH 3, 2008

PRELIMINARY INJUNCTION HEARING

VOLUME V

BEFORE THE HONORABLE GREGORY K. FRIZZELL, Judge

APPEARANCES:

For the Plaintiffs: Mr. Drew Edmondson  
Attorney General  
Mr. Robert Nance  
Mr. Daniel Lennington  
Ms. Kelly Hunter Burch  
Mr. Trevor Hammons  
Assistant Attorneys General  
313 N.E. 21st Street  
Oklahoma City, Oklahoma 73105

Glen R. Dorrough  
UNITED STATES COURT REPORTER

EXHIBIT

7

1 MR. EDMONDSON: That's correct, Your Honor.

2 THE COURT: Attorney General Edmondson, you may call  
3 your next witness.

4 MR. EDMONDSON: I call Dr. Robert Lawrence.

5 ROBERT SWAN LAWRENCE

6 Called as a witness on behalf of the plaintiffs, being first  
7 duly sworn, testified as follows:

8 THE COURT: State your full name for the record,  
9 please, sir.

10 THE WITNESS: Robert Swan Lawrence.

11 THE COURT: You may proceed.

12 DIRECT EXAMINATION

13 BY MR. EDMONDSON

14 Q. Dr. Lawrence, would you please briefly describe your  
15 educational background?

16 A. I obtained my bachelor's degree and my medical degree from  
17 Harvard University, trained in internal medicine at the  
18 Massachusetts General Hospital in Boston, spent three years as  
19 an epidemic intelligence service officer with the CDC, one year  
20 of it in Atlanta investigating outbreaks of parasitic and other  
21 infectious diseases and two years of it in El Salvador doing  
22 malaria epidemiology.

23 I then joined the faculty of the University of North  
24 Carolina in Chapel Hill and spent four years directing a  
25 program in community health. Then was recruited back to Boston

1 water, air, odor, so there are social impacts for community  
2 members. This is not as great a problem for the Illinois River  
3 Watershed, but there are many parts of the country now where  
4 downwind of concentrated animal feeding operations, the air  
5 quality from the point of view of contaminants in the air as  
6 well as from the problem of intense odor has become widespread.

7 Q. And from where does that odor come?

8 A. Well, the odor is part --

9 MR. RYAN: Your Honor, I object. He said it doesn't  
10 apply to the IRW.

11 THE COURT: Sustained. We've all been to the  
12 panhandle, I believe. Go ahead.

13 THE WITNESS: Shall I answer it?

14 THE COURT: No, the objection is sustained. Go ahead.

15 Q. (By Mr. Edmondson) I'll rephrase the question. Is there  
16 bacteria in the litter of the poultry waste?

17 A. There are bacteria. There are other compounds, breakdown  
18 products of urine and feces, ammonia, hydrogen sulfide, nitrous  
19 oxide. It depends a little bit on the mix of what animal we're  
20 talking about as well as what kind of bedding or other organic  
21 material has been mixed in with the waste.

22 Q. Specific as to poultry waste, is there bacteria associated  
23 with poultry waste?

24 A. Yes.

25 Q. What nature of bacteria is associated with poultry waste?

1 A. Well, there are a broad range of organisms that have been  
2 isolated from poultry waste. Salmonella and Campylobacter  
3 species are among the more important human pathogens. E. coli,  
4 Enterococci, there are species of Coccidioides that is not  
5 infectious for humans, but is an important problem for growth  
6 of the bird. So Arsenicals, Roxarsone and other organic  
7 arsenic materials, are added to the poultry feed in order to  
8 reduce the Coccidioides to enhance the growth of the bird.  
9 There's also a Giardia species, again it's not the species that  
10 happens to affect the humans, but it's present in poultry  
11 waste.

12 Q. Don't most of these bacteria die at some point in time?

13 A. Eventually, but many of them can live for three or four  
14 months after being deposited by the bird.

15 Q. What factors determine the length of viability of these  
16 bacteria?

17 MR. RYAN: Your Honor, there's been no foundation for  
18 this question of this witness. I object.

19 THE COURT: Sustained.

20 Q. (By Mr. Edmondson) Are you able to state from the  
21 materials you reviewed or from your own knowledge and expertise  
22 whether these problems are present in the Illinois River  
23 Watershed?

24 A. Yes, from what I have read, the story is very remarkably  
25 similar to what I've directly observed on the eastern shore of

1 A. Yes, it does. It shows that for E. coli the latency can  
2 range from one to seven days. For Salmonella, it's shorter,  
3 one to three days. And for Campylobacter, it's two to five  
4 days.

5 Q. Does it also purport to show the reported symptoms caused  
6 by each of those pathogens?

7 A. Yes, and the symptoms for all three of these major human  
8 pathogens are pathogens to humans, I should say. They are  
9 pathogens derived from both animal and human sources, but the  
10 symptoms include gastroenteritis, nausea, vomiting, watery  
11 and/or bloody diarrhea, abdominal cramping, dehydration, kidney  
12 failure in the case of E. coli. And then for Salmonella and  
13 Campylobacter, the same basic underlying gastroenteritis  
14 symptoms of nausea, vomiting, diarrhea. And significantly the  
15 infections can involve organ systems outside of the GI tract.  
16 For example, Campylobacter has been implicated in arthritis and  
17 in Guillain-Barre syndrome.

18 Q. Now, Dr. Lawrence, based upon your education, expertise  
19 and experience and based upon all of the materials that you've  
20 reviewed by both the State and the defendants, do you have an  
21 opinion as to whether the surface application of poultry waste  
22 within the Illinois River Watershed poses an imminent and  
23 substantial endangerment to the health or the environment of  
24 that watershed?

25 MR. RYAN: Your Honor, I object. There's been no